

10/506748

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau(43) International Publication Date  
12 September 2003 (12.09.2003)

PCT

(10) International Publication Number  
WO 03/074513 A2(51) International Patent Classification<sup>7</sup>: C07D 401/12,  
A61K 31/404, A61P 43/00, C07D 401/14, 417/14Park, Macclesfield, Cheshire SK10 4TG (GB). MORLEY,  
Andrew, David [GB/GB]; AstraZeneca R & D Alderley,  
Alderley Park, Macclesfield, Cheshire SK10 4TG (GB).

(21) International Application Number: PCT/GB03/00893

(74) Agent: ASTRAZENECA; Global Intellectual Property,  
Mereside, Alderley Park, Macclesfield, Cheshire SK10  
4TG (GB).

(22) International Filing Date: 4 March 2003 (04.03.2003)

(25) Filing Language: English

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE,  
SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,  
VC, VN, YU, ZA, ZM, ZW.

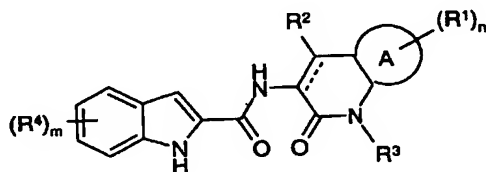
(26) Publication Language: English

(30) Priority Data:  
0205162.1 6 March 2002 (06.03.2002) GB(71) Applicant (*for AE, AG, AL, AM, AT, AU, AZ, BA, BB, BE,  
BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CY, CZ, DE,  
DK, DM, DZ, EC, EE, ES, FI, FR, GB, GD, GE, GH, GM,  
GR, HR, HU, ID, IE, IL, IN, IS, IT, JP, KE, KG, KP, KR,  
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MC, MD, MK, MN,  
MW, MX, MZ, NL, NO, NZ, OM, PH, PL, PT, RO, RU, SC,  
SD, SE, SG, SK, SL, SZ, TJ, TM, TN, TR, TT, TZ, UA, UG,  
UZ, VC, VN, YU, ZA, ZM, ZW only*): ASTRAZENECA  
AB [SE/SE]; Sodertalje, S-151 85 (SE).(84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).(71) Applicant (*for MG only*): ASTRAZENECA UK LIM-  
ITED [GB/GB]; 15 Stanhope Gate, London, Greater Lon-  
don W1K 1LN (GB).Published:  
— without international search report and to be republished  
upon receipt of that report

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): BIRCH, Alan,  
Martin [GB/GB]; AstraZeneca R & D Alderley, AlderleyFor two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: CHEMICAL COMPOUNDS



(1)

(57) Abstract: Heterocyclic amides of formula (1) wherein: is a single or double bond; A is phenylene or heteroarylene; m is 0, 1 or 2; n is 0, 1 or 2; R<sup>1</sup> is selected from for example halo, nitro, cyano, hydroxy, carboxy; R<sup>2</sup> is hydrogen, hydroxy or carboxy; R<sup>3</sup> is selected from for example hydrogen, hydroxy, aryl, heterocyclyl and C<sub>1-4</sub> alkyl (optionally substituted by 1 or 2 R<sup>8</sup> groups); R<sup>4</sup> is independently selected from for example hydrogen, halo, nitro, cyano, hydroxy, C<sub>1-4</sub> alkyl, and C<sub>1-4</sub> alkanoyl; R<sup>8</sup> is selected from for example hydroxy, -COCOR<sup>9</sup>, -C(O)N(R<sup>9</sup>)(R<sup>10</sup>), -NHC(O)R<sup>9</sup>, (R<sup>9</sup>)(R<sup>10</sup>)N- and -COOR<sup>9</sup>; R<sup>9</sup> and R<sup>10</sup> are selected from for example hydrogen, hydroxy, C<sub>1-4</sub> alkyl (optionally substituted by 1 or 2 R<sup>13</sup>); R<sup>13</sup> is selected from hydroxy, halo, trihalomethyl and C<sub>1-4</sub> alkoxy; or a pharmaceutically acceptable salt or pro-drug thereof; possess glycogen phosphorylase inhibitory activity and accordingly have value in the treatment of disease states associated with increased glycogen phosphorylase activity. Processes for the manufacture of said heterocyclic amide derivatives and pharmaceutical compositions containing them are described.

WO 03/074513 A2